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Southern Regional Research Laboratory  
New Orleans 19, Louisiana  
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To: Director and Laboratory Staff  
From: Survey and Appraisal Section, Cotton Processing Division  
Subject: SURVEY NOTES

L I N T   C O T T O N

COTTON CONSUMPTION AND MILL ACTIVITY

The rate of cotton consumption in May showed slightly more than the usual seasonal decline but was still somewhat above trade expectations. It now appears that consumption will total at least 10 million bales for the 1946-47 crop year (ending August 1) as compared with 9,166,060 bales last year and 9,567,932 the year before. This will be a peacetime record. Exports of cotton fabrics during the first four months of 1947 totaled 435 million yards as compared with 265 million yards for the same period last year. Stocks of cotton continued to decline, with only 1,928,800 bales on hand in consuming establishments, and only 1,836,000 bales in public storage on May 31.

Cotton consumption and stocks, and spindle hours  
in cotton mills

	: May	: April	: May	: May
	: 1947	: 1947	: 1946	: 1940
Consumption, bales	: 827,234	: 882,880	: 871,470	: 641,636
On hand, 1000 bales	: 3,765	: 4,619	: 9,994	: 11,406
Active spindle hours, billions	: 9.9	: 10.2	: 9.6	: 8.0
Spindle activity, percent of	:	:	:	:
80-hour capacity	: 119.7	: 121.7	: 110.5	: 89.4
	:	:	:	:

COTTON PRICES

Cotton prices have continued to rise during the last two months. On June 26, cotton delivered at mills was selling for 38.78 cents as compared with 37.53 cents in May. Cotton for October delivery was selling on the New Orleans Cotton Exchange at 32.60 cents as compared with 37.09 cents for July delivery.

Cotton fabric prices and mill margins (as compiled by PMA) dropped 2.6 cents and 3.4 cents, respectively, from April to May, but continued far higher than before O.P.A. ceilings were removed.



Prices of raw cotton, rayon staple, and cotton fabrics,  
and cotton mill margins in cents

	May 1947	November 1946	May 1946	Average 1939-40
Cotton, Middling 15/16" delivered at mills, lb.	37.53	32.20	28.58	11.01
Rayon, viscose staple, equivalent price 1/, lb.	28.48	23.67	22.25	22.25
Cotton fabrics, average 17 constructions 2/	83.54	71.25	50.79	22.86
Mill margins 3/, average 17 cotton fabrics	47.86	40.52	23.73	12.68

- 1/ Cost to mill of same amount of usable fiber as supplied by one pound of cotton (rayon price .89).
- 2/ Price of approximate quantity of cloth obtainable from a pound of cotton with adjustments for salable waste.
- 3/ Difference between cloth prices and prices (10 market average) of cotton assumed to be used in the 17 constructions.

SEA ISLAND COTTON PRODUCTION AND USES

Production of Sea Island cotton in the British West Indies averaged 3,272 bales per year during 1921-22 to 1930-31, climbed to 6,744 bales in 1940-41, then fell to 2,964 bales in 1943-44 (and totaled less than 3,000 bales in 1945-46). In 1933, a West Indies Sea Island Cotton Association was formed to stimulate consumption. The quantity used in laces declined after World War I, but its use in fine quality poplins for pajamas and shirts, in knit underwear, ladies' hosiery, and high quality raincoats increased, and considerable quantities also were used for thread and tire cords. During World War II it was used for balloon fabrics, parachutes, and other service equipment. The Association "will resume its activities." (Only 949 bales of 1-1/2" and greater staples were imported into the United States from West Indies in 1946.) It is stated that "no longer or finer cotton than V 135 (St. Vincent) Superfine (Sea Island) is grown elsewhere in the world."

Journal of the Textile Institute, August 1946, p. T151.

COTTON PRODUCTS

ELASTIC COTTON YARN DEVELOPED BY UNITED STATES RUBBER

A new cotton yarn of an elastic nature but containing no rubber has been developed by the United States Rubber Company, it was announced in Los Angeles. The yarn is twisted into the form of a coil giving the material its elasticity. It is practicable for use in slipcovers, sweaters, surgical bandages, and other products in which springiness is desirable, the report stated.

Cotton Trade Journal, June 20, 1947, p. 7.

BEMIS DEVELOPS DRY MILK BAG

"The American Dry Milk Institute has awarded certificates of approval to two types of laminated textile bags for the shipment of nonfat dry milk solids for human consumption. Bemis Bro. Bag Co., manufacturers of the bags which were



approved, co-operating with the institute, carried on extensive research work in order to develop the proper types of bags for this hard-to-pack product."

Journal of Commerce, June 19, 1947, p. 14.

#### LINEN SUPPLY COMPANIES SET STANDARDS

Linen Supply Association of America has organized a "Linen Supply Research Project" headed by Jonas H. Mayer of Steiner Sales Company. Eight specifications have been drawn and 12 more are expected—to cover all types of fabrics used in linen supply—covering only fabric washability, wearability, and appearance. Seals of approval will be issued for use on qualifying fabrics. The specifications were written by U. S. Testing Company.

Daily News Record, June 25, 1947, p. 15.

#### COATED FABRICS REPLACED BY UNSUPPORTED PLASTIC FILMS

Consumption of nylon and rayon broad woven goods by the manufacturers of plastic textiles may decline by nearly 50,000,000 yards in the next year, owing to the increasing popularity of unsupported plastic fabrics which virtually have replaced light-weight coated fabrics for use as shower curtains, tablecloths and related products, according to industry executives. It was said that the growth of unsupported fabrics is entirely due to technological developments in the compounds used in the coating of fabrics, and that these advances are now so mature that the use of reinforcing fabrics is now considered unnecessary. They said, too, that cotton duck and other cloths used in the heavier types of coated fabrics also are slated for a decline inasmuch as experiments with heavy gauge unsupported film already have proven successful in such applications as upholstery, automobile tops and similar fabrics.

Journal of Commerce, June 2, 1947, p. 18.

#### BEMIS BAG NAMED TO DISTRIBUTE NEW ELECTRIC BAG CLOSER

Bemis Bro. Bag Co. has been appointed exclusive distributor of a new hand electric filled-bag closer, manufactured by Dave Fischbein Co., it is made known. The machine weighs less than 11 pounds, including full cone of thread, and is the only bag closer of its kind on the market, the company states. Designed exclusively for bag closing, it operates from any AC or DC 110 volt line, and is suited for closing cotton and burlap, as well as most kinds of paper bags. It will close about 100 bags an hour, with tight and uniform stitches, four to the inch. Requiring no skill, operators have only to guide the machine, holding bag in one hand and the closer in the other. A conveniently located switch on the handle makes starting and stopping possible with a flick of the thumb.

Daily News Record, June 3, 1947, p. 18.

#### NEW TYPE NONPOROUS TOWEL, WASHCLOTH INTRODUCED BY FIRM.

A new type of reusable towel and washcloth called "Plaracot," made of plastic, rayon, and cotton, has been introduced by the Plaracot Co. of Chicago. The new product is said to shed all dirt after rinsing in water and suds because it is nonporous. The company states it can be used several times and ironed after washing like an ordinary cloth, and suggests it for dusting and polishing. Towels are made in size 18 x 32 and come four to a package in different colors, including white, pink, yellow-green, and blue. Washcloths, dishcloths or general utility cloths are made in size 18 x 18, five to a package, in white, pink,



yellow-green, and blue. The towels retail at 50 cents and the cloths at 40 cents.

Daily News Record, June 11, 1947, p. 20.

(This reads like it is made of Visking Corp.'s unwoven fabric, although no actual proof is available.)

## COMPETITIVE MATERIALS

### WORLD RAYON PRODUCTION INCREASES BUT STILL BELOW 1941 LEVEL

World production of rayon amounted to 1,672 million pounds in 1946, an 18% increase over 1945, but 41% below the record 1941 level. Of the 1946 total, about 66% was yarn and about 34% staple; while 76% was viscose, 23% acetate, 2% cuprammonium, and 1% nitrocellulose. Production was still far below 1941 levels in Germany, Italy and Japan, but reached record levels in such countries as United States, Great Britain, Belgium, Czecho-Slovakia, Norway, Spain, Canada, Argentina, and Brazil.

Production of rayon by countries, millions of pounds			
	1941	1945	1946
United States	573.2	792.0	853.9
Other North America	19.5	21.5	22.6
South America	25.9	35.0	40.1
France	108.8	49.4	101.8
Germany	824.0	190.0	107.6
Great Britain	146.7	143.6	183.0
Italy	419.5	7.4	94.5
Other European	242.7	149.1	238.0
Japan	465.1	28.1	30.2
World total	2,825.4	1,416.1	1,671.7

Rayon Organon, June 1947.

### ENKA'S NEW RAYON PLANT TO OPERATE IN DECEMBER

American Enka's new plant at Lowlands, near Morristown, Tennessee, is scheduled to begin operation on December 22, although only part of the first unit will be complete at that time. The plant, being built on a 700-acre tract, will cost close to \$25 million for the first unit, while later units, to be completed in the next two or three years, will bring total cost to around \$50 million. Between 1,500 and 2,000 persons will be employed in the first unit, turning out 20 million pounds of rayon tire cord and 2 million pounds of rayon (textile) yarn annually.

Daily News Record, June 23, 1947, p. 32.

(Above will represent a substantial increase in rayon tire yarn production, which last year totaled around 214 million pounds.)

### WORLD WOOL PRODUCTION AND STOCKS DOWN

World wool production totaled 3,670 million pounds (greasy basis) in 1947, 2% less than in 1946 and the smallest output since 1935. Of the total, 78% was



apparel wool; the remainder, carpet wools. The downward trend, beginning in 1943, was due to increased costs of production, higher returns from other farm products than for wool, threatening surpluses of foreign wools in the United States and Canada; to severe drought in Australia and South Africa; and to warfare in Europe and Asia.

Wool production in United States and in World,  
greasy basis, million pounds

	1939	1942	1946	1947
United States	426.2	455.0	341.2	315.0
World	4,070.0	4,160.0	3,730.0	3,670.0

The huge wool stocks accumulated during the war have been reduced about 10% since a year ago, but will still total about 4,500 million pounds on June 30, 1947. Of this total, about 45% is government owned, including 1,590 million pounds of British Dominion owned by the United Kingdom Wool Disposals, Ltd. (a joint organization of the British Empire), and 450 million pounds of United States wool owned by the United States Commodity Credit Corporation.

Foreign Crops and Marketing, June 23, 1947, p. 401.

#### PACIFIC DEVELOPS WASHABLE WOOLEN

Pacific Mills worsted division has developed in its research laboratories at Lawrence, Massachusetts, a new and exclusive process for making wool fabrics washable, according to the company. The new process, called Pacifixed, when applied to wool fabrics, is claimed to fix the size of the finished garment by holding shrinkage to a minimum, and to help the garment wear longer and drape better.

Actual washing tests conducted by Pacific Mills and by the American Institute of Laundering on wool shirts made of Pacifixed fabrics show less than 2% shrinkage. The Institute's seal of approval has been given these fabrics, the first to be certified by the Institute, for wool-washable shirts, it was also stated. The shirts are expected to retail for about \$12.00

Journal of Commerce, N. Y., June 6, 1947 p. 15.

#### DUPONT'S FURFURAL-NYLON DEVELOPMENT COST \$1 MILLION

DuPont's new process, "to use such agricultural by-products as corncobs, cottonseed hulls, and the hulls or bran of oats and rice in the making of nylon," cost DuPont about 12 years' time and approximately \$1,000,000 "from the first small-scale laboratory experiments to the large semi-works units which can produce tons of adiponitrile from furfural," according to Dr. Oliver W. Cass, who headed the research team.

DuPont's Agricultural News Letter, May-June 1947, p. 43.

#### GOODYEAR ANNOUNCES ALL-NYLON PASSENGER CAR TIRE

Goodyear Tire & Rubber Company has announced production of the first all-nylon auto tire available for passenger cars. According to a statement by P. W. Litchfield, "Goodyear Double Eagle, finest tire, is offered in all-nylon cord



in the larger sizes." Amplifying this, the statement continues, "This announcement means that the Goodyear Research Laboratory is first to solve the difficult technical problems involved in building the extreme light weight and toughness of nylon cord into an automobile tire with nylon in all six complete plies. The Nylon Double Eagle is a six-ply tire and all six plies are nylon."

Rayon Textile Monthly, June 1947, p. 74.

#### SILK PROMOTION SCHEME

About \$500,000 in Government and industry funds will be spent in the United States on a "proposed promotional campaign on Japanese raw silk," which will include not only advertising expenditures, but funds for establishment of the International Silk Guild as a growing organization and to "encourage trade research into developing new uses for silk of better quality. It will be mainly a government-subsidized program to start with."

Daily News Record, May 31, 1947, p. 1.

#### TEXTILE RESEARCH NOTES

##### DR. C. NATHAN REED JOINS I.T.T.

Dr. C. Nathan Reed has joined the Division of Organic Chemistry of the Institute of Textile Technology. Dr. Reed, a native of Campbell, Texas, comes to the Institute from Hercules Powder Company, prior to which he was a Lt. Colonel in the Army's Chemical Warfare Service. He is the author of several papers on starch.

Daily News Record, June 24, 1947, p. 27.

##### NEW PRESIDENT ELECTED FOR SIRRINE FOUNDATION

George M. Wright of Abbeville, S. C., was elected president of the J. E. Sirrine Textile Foundation at a meeting held on June 5 at Charleston, S. C. He succeeds Robert H. Chapman of Inman and Riverdale Mills, Spartanburg, who was relieved at his own request. In turn, Mr. Chapman succeeds Richard W. Arrington of Union Bleachery as vice-president. The Foundation has raised about \$840,000, the income of which, and some of the principal, if necessary, will be used in connection with textile education at Clemson College. Eventually, this may mean an expansion of the faculty and equipment at Clemson's Textile School. Before deciding upon operating plans, it was decided to study what other textile schools were doing, particularly North Carolina State College.

Daily News Record, June 6, 1947, p. 1.

##### DUPONT DOUBLING RESEARCH

DuPont intends to more than double its research facilities, according to the recently released Annual Report for 1946, which stated that a substantial number of research personnel had completed government ordinance assignments and had returned to company service. Expanded facilities through new laboratories and additions to existing laboratories are being made at 15 locations. Company was not able to effect in 1946 "the desired increase in its research staff."

Agricultural News Letter (DuPont) May-June 1947, p. 47.



## QM'S TEXTILE RESEARCH DISCUSSED

The QM General now has completed 93 textile, clothing, and equipage research contracts with "outside" private and public laboratories, according to testimony by Brig. Gen. W. H. Middleswart, Chief of the QM Planning Division. In addition, 92 "have been negotiated" with privately-owned manufacturing plants, 112 with educational institutions, and 15 with government branches, including National Bureau of Standards and USDA. The QM planning chief said \$2.5 million will be spent in fiscal year 1948 for research in fields of subsistence, clothing and equipage, and general supplies—1/3 of 1% of QM budget. Specific research projects include (1) development of lighter-weight shoulder pack for airborne troops; (2) increase wear-resistance by 10%; (3) development of improved shrink-resistance. Gen. Middleswart also "told how the Goodyear Tire & Rubber Co. had been working on a raincoat fabric which not only would keep the rain off, but also would permit body vapors to escape.

Daily News Record, June 2, 1947, p. 4.

## COPYRIGHT PROTECTION FOR TEXTILES URGED

Another effort is being made to pass a law calling for copyright protection for textile designs in the United States. In a hearing on May 21 on the Hartley Bill (H. R. 2680) witnesses stated that U. S. was only country which did not afford protection to organizations of new textile designs and styles, that patenting textile designs was "impractical." The new bill would make it possible to copyright textile designs like songs, books, etc.

Daily News Record May 22, 1947.

## L I N T E R S   A N D   C E L L U L O S E

### LINTERS PRICES DROP

Linters prices broke sharply in May and June and averaged below the last O.P.A. ceilings for the felting grades and slightly above for the chemical grades. For example, Grade 2 (a felting grade) averaged 8.92 cents in June as compared with 13.37 cents in March, 15.42 cents in December 1946, and an O.P.A. ceiling in October of 11.88 cents; Grade 6 (a chemical grade) was priced at 6.72 cents as compared with 10.50 cents in February and March, 12.00 cents in December 1946, and 6.22 cents in October 1946 under O.P.A. The price drop is reported to have been due to the temporary withdrawal of many consuming establishments from the market, after purchasing their requirements earlier in the year.

An average of 198 pounds of linters was cut per ton of cottonseed in 1946, the highest on record, comparing with 188 pounds in 1945 and an average of 177 pounds in 1939-43.

### RAYON RESEARCH SEEKS CELLULOSE IN WHOLE COTTON

Raleigh, N. C. - Experiments are being conducted by American Viscose Corp. at Fredericksburg, Va., in the use of the whole cotton plant as a source of cellulose, it is reported here.

The experiments are said to be in charge of Dr. David T. Milne, who received his doctorate at the University of North Carolina for work in cellulose chemistry under Frank K. Cameron. Dr. Cameron was long-time head of the chemistry department at Chapel Hill and is now director emeritus.



Dr. Cameron himself has conducted laboratory experiments for years in the use of the whole cotton plant as a source of cellulose, and although such extraction is yet to be placed on a commercial, or even a pilot plant basis, the anticipated yield of alpha cellulose per acre could be expected to be about that from an acre of Southern pine, Dr. Cameron maintains. The cost of raising whole cotton for cellulose purposes amounts to about \$20 per acre, he estimates.

International Harvester Co. also has been interested in a possible use for the whole cotton plant. In 1940, it made a grant to cover the cost of growing a crop of whole cotton which was carried on at the Hogan Bros. Farms, about four miles from Chapel Hill. The farm machinery firm evidently was interested because of the possibility of developing special machinery for the handling of such a crop, which is handled differently from lint cotton, no chopping or picking being necessary. The 1940 tests substantiated earlier tests as to the costs per acre of growing whole cotton. But the experiments were not continued by International Harvester, probably because of the war.

Last year, the North Carolina State Planning Board, of which Felix Grissette was director, also conducted an experiment in growing and processing whole cotton, according to Dr. Cameron's formula. This board went out of existence yesterday. But it has prepared a report on its experiment in growing and extracting cellulose from whole cotton, which will soon be ready for distribution, it is expected.

From Daily News Record, July 1, 1947, p. 22.

#### BAMBOO SUGGESTED AS SOURCE OF CELLULOSE IN INDIA

Bamboo was held to be the most feasible source of cellulose for a potential rayon plant in India in a report by Dr. Lavji Thoria to the Board of Scientific and Industrial Research of that country. Only 6,500 tons annually of chemical cotton could be expected from India's production of American cotton varieties (Indian cottonseeds are clean). India has only a limited supply of soft coniferous woods suitable for wood pulp, and it is accessible only with difficulty. Bagasse is available in enormous quantities, but little or no work has been done on this subject in India (although foreign patents claim a really good pulp). Bamboo has never been used for rayon but its use, mixed with chemical cotton, is suggested. Work to reduce ash-content is stated to be needed.

Indian Textile Journal, April 1947.

#### ARUNDO DONAX (SPANISH GRASS) AS SOURCE OF RAYON CELLULOSE

Development of rayon from pulp obtained from reeds of the arundo donax family, undertaken in Italy by Snia Viscosa before the war, Mr. Mancini (Director of Chatillon S.A.L. (a rayon concern, Milan) said he believed had come to a complete standstill, the reason being that the yield of pulp per acre was far below earlier calculations plus the fact that the cellulose from the reeds had a number of undesirable characteristics.

Daily News Record, May 20, 1947, p. 29.

#### P E A N U T S

#### PEANUT PRODUCTION TO BE INCREASED IN BRITISH AFRICA

World peanut production in 1946 was less than 1% smaller than a year ago but a slightly larger crop in 1947 is in prospect. "An interesting feature of the outlook (for 1947) is the British project for mechanized production in east and



central Africa (Foreign Crops and Markets, March 3, 1947). This project provides for development of 3.2 million acres by 1952, an area equal to the 1946 harvested acreage for this crop in the United States. The possibility of initiating such a scheme in British West Africa is also under serious consideration."

World peanut production, thousands of short tons					
	: Average	:	1945	:	1946
	: 1935-39	:		:	
United States	: 614.7	:	1,021.1	:	1,037.9
Total, North America	: 640.0	:	1,103.0	:	1,125.0
Europe	: 28.0	:	22.0	:	24.0
Asia (excluding USSR)	: 7,040.0	:	6,897.0	:	6,916.0
South America	: 129.0	:	221.0	:	200.0
Africa	: 1,673.0	:	1,348.0	:	1,288.0
Australia	: 7.0	:	12.0	:	15.0
Total World	: 9,532.0	:	9,613.0	:	9,578.0
	:	:		:	

Foreign Crops and Markets, May 26, 1947, p. 357.

## R I C E

### WORLD RICE PRODUCTION INCREASING

The world rice harvest of 1946-47 (August-July) is now estimated at 7,000 million bushels, 11% larger than the wartime low in the preceding year, but 5% less than the prewar 1935-39 average. Information received in the Office of Foreign Agricultural Relations points to continued recovery from the decreased volume of rice produced during the war, owing particularly to increases in Asia, where 6,548 million bushels were produced in 1946-47. (Acreage and production totals are given for each country in reference below).

United States and world rice production in millions of bushels					
	: 1935-36	:	1945-46	:	1946-47
	: to	:		:	
	: 1939-40	:		:	
United States	: 49.9	:	68.2	:	71.5
World	: 7,444.0	:	6,345.0	:	7,001.0
	:	:		:	

Foreign Crops and Markets, May 26, 1947, p. 354.

## M I S C E L L A N E O U S

### FISH WASTE TO BE UTILIZED BY GLIDDEN'S

A new plant at Pascagoula, Miss., to produce condensed fish solubles from "fish stick water" (liquid remainder from pressing oil from Menhaden fish) has been completed by Growth Products Co., a Mississippi corporation. Adrian D. Joyce, Chairman of the Board of Glidden's is also Chairman of the new company, while



Wallace M. Quinn, owner of Wallace M. Quinn Fisheries Co. of Pascagoula, is president. "Fish solubles are a new type of protein and vitamin-bearing ingredient . . ." which "will be used in new Glidden stock and poultry feeds and concentrates which the company has had under development for several years," according to P. E. Sprague, Glidden's vice-president. Initial output will be used by the Glidden feed mill at Indianapolis.

Wall Street Journal, June 6, 1947, p. 8.